

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A method of manufacturing a disk drive formed from a head disk assembly (HDA) containing a plurality of magnetic surfaces, the HDA including at least one magnetic disk with a at least one magnetic surface and a head stack assembly (HSA) that includes a multiple transducer head heads, each transducer head corresponding to a magnetic surface of a magnetic disk, each transducer head with a write element for writing data to the magnetic disk and a read element for reading data from the magnetic disk, the method comprising the steps of:

mounting the HDA in a servo track writer and moving the HSA to desired positions over the magnetic disk;

measuring a width of ~~the~~ each read element of each transducer head with the servo track writer to establish a collection of read width measurements;

measuring a width of ~~the~~ each write element of each transducer head with the servo track writer to establish a collection of write width measurements;

determining a track pitch based on the ~~measured width of the read element and the measure width of the write element~~ collection of read element and write element width measurements; and

writing servo tracks onto the magnetic disk at the determined track pitch.

2. (Original) The method of Claim 1 wherein the HDA carries a controller card having a microprocessor that is placed in communication with the STW when the HDA is mounted in the STW and wherein the microprocessor participates in the steps of measuring the widths of the read and write elements

3. (Original) The method of Claim 1 wherein the HDA is a bare HDA and wherein the STW includes independent processing capability for performing the steps of measuring the widths of the read and write elements.

4 (Canceled)

5. (Currently Amended) The method of Claim 1 wherein the steps of measuring ~~the~~ a width of ~~the~~ a read element and ~~the~~ a width of ~~the~~ a write element are accomplished by:
writing a calibration track with the write element;
positioning the read element to a first side of the calibration track;
gathering amplitude data by incrementally moving the read element from the first side of the calibration track to a second opposite side while reading data at each incremental position; and
calculating the width of the read element and the width of the write element based on the amplitude data.

6. (Canceled)

7. (Currently Amended) A disk drive comprising a head disk assembly (HDA) containing a plurality of magnetic surfaces, the HDA including at least one magnetic disk ~~that includes a~~ with at least one magnetic surface and a head stack assembly (HSA) that includes a multiple transducer head heads, each transducer head corresponding to a magnetic surface of a magnetic disk, each transducer head with a write element for writing data to the magnetic disk and a read element for reading data from the magnetic disk, the disk drive produced using the steps of:

measuring a width of ~~the~~ each read element of each transducer head to establish a collection of read width measurements while the HDA is in a servo track writer;
measuring a width of ~~the~~ each write element of each transducer head to establish a collection of write width measurements while the HDA is in a servo track writer;

determining a track pitch based on the ~~measured width of the read element and the measured width of the write element~~ collection of read element and write element width measurements; and

writing servo tracks onto the magnetic disk at the determined track pitch.

8. (Currently Amended) The disk drive of Claim 7 ~~where~~ wherein the a transducer head with a write element for writing data to the magnetic disk and a read element for reading data from the magnetic disk is a magneto-resistive transducer head.

9. (Canceled)

10. (Currently Amended) The disk drive of Claim 7 wherein the steps of measuring ~~the a~~ width of ~~the a~~ read element and ~~the a~~ width of ~~the a~~ write element are accomplished by:

writing a calibration track with the write element;

positioning the read element to a first side of the calibration track;

gathering amplitude data by incrementally moving the read element from the first side of the calibration track to a second opposite side while reading data at each incremental position; and

calculating the width of the read element and the width of the write element based on the amplitude data.

11. (Canceled)

12. (New) A method of manufacturing a disk drive formed from a head disk assembly (HDA) containing at least one magnetic disk with a magnetic surface and a head stack assembly (HSA) that includes a transducer head with a write element for writing data to the magnetic disk and a read element for reading data from the magnetic disk, the method comprising the steps of:

mounting the HDA in a servo track writer and moving the HSA to desired positions over the magnetic disk;

measuring a width of the read element with the servo track writer;

measuring a width of the write element with the servo track writer;

determining a track pitch based on the measured width of the read element and the measured width of the write element; and

writing servo tracks onto the magnetic disk at the determined track pitch.

wherein the step of determining a track pitch based on the measured width of the read element and the measured width of the write element is accomplished by:

establishing a nominal pair of width values;

using a nominal track pitch when the measured widths are within corresponding +/- limits of the nominal pair of width values;

using a narrower than nominal track pitch when the measured width of the write elements is narrower than the - limit of the nominal width value of the write element; and

using a wider than nominal track pitch when the measured width of the write element is wider than the + limit of the nominal width value of the write element.

13. (New) The method of Claim 12 wherein the HDA carries a controller card having a microprocessor that is placed in communication with the STW when the HDA is mounted in the STW and wherein the microprocessor participates in the steps of measuring the widths of the read and write elements

14. (New) The method of Claim 12 wherein the HDA is a bare HDA and wherein the STW includes independent processing capability for performing the steps of measuring the widths of the read and write elements.

15. (New) The method of Claim 12 wherein the steps of measuring the width of the read element and the width of the write element are accomplished by:

writing a calibration track with the write element;

positioning the read element to a first side of the calibration track;

gathering amplitude data by incrementally moving the read element from the first side of the calibration track to a second opposite side while reading data at each incremental position; and

calculating the width of the read element and the width of the write element based on the amplitude data.